

MARITIME HERITAGE MINNESOTA



Ann Merriman
Christopher Olson

Minnesota Suburban Lakes Survey Project: Medicine Lake Survey Report



© 2017

Ann Merriman, Christopher Olson, and Maritime Heritage Minnesota

Acknowledgments

Maritime Heritage Minnesota (MHM) thanks the People of Minnesota for their support of the Minnesota Historical and Cultural Heritage Grant program of the Arts and Cultural Heritage Fund of the Clean Water, Land and Legacy Amendment; without the MHCH Grant MHM received to conduct this project, the work would not have been undertaken. MHM would also like to acknowledge the Grants Office of the Minnesota Historical Society for their expertise. We thank Bruce Koenen and Amanda Gronhvd of the Office of the State Archaeologist for their time. MHM thanks Gery schiebe, the Plymouth Historical Society, and the staff of the Gale Library at the Minnesota Historical Society for their efforts. Lastly, MHM thanks our volunteers Josh Knutson, Betty Lloyd, Kelly Nehowig, Ed Nelson, and Mark Slick along with our Board of Trustees Mike Kramer, Deb Handschin, and Steve Hack for their continual support.

Front Cover: Moon 1919. Digitized by MHM.

Maritime Heritage Minnesota Staff, Volunteers, Board of Trustees, & Mascots



© 2017 Ann Merriman, Christopher Olson, and Maritime Heritage Minnesota. MHM IS A 501(c).3 NON-PROFIT CORPORATION DEDICATED TO THE DOCUMENTATION, CONSERVATION, AND PRESERVATION OF MINNESOTA'S FINITE NAUTICAL AND MARITIME CULTURAL RESOURCES WITHIN A NOT-FOR-PROFIT PARADIGM

Introduction

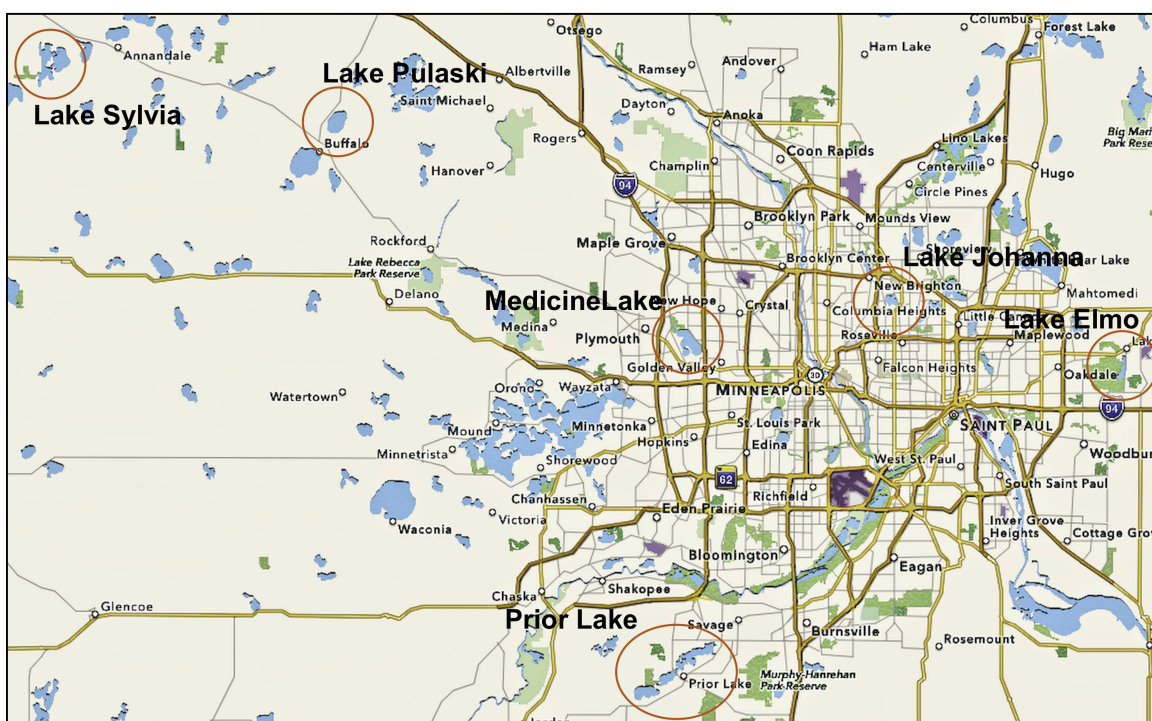
Wrecks and the artifacts associated with them tell a story. Removing or otherwise disturbing artifacts, treating them as commodities that can be sold, obliterates that story. Nautical archaeological and maritime sites are finite, and are significant submerged cultural resources. Nautical, maritime, underwater, maritime terrestrial – Maritime Heritage Minnesota's (MHM) deals with all of these types of sites throughout the State of Minnesota. MHM's Mission is to document, conserve, preserve, and when necessary, excavate these finite cultural resources where the welfare of the artifact is paramount. MHM is concerned with protecting our underwater and maritime sites – our shared Maritime History – for their own benefit in order for all Minnesotans to gain the knowledge that can be obtained through their study. MHM's study of wrecks does not include the removal of artifacts or damaging the sites in any way. MHM does not raise wrecks or 'hunt' for 'treasure'. Submerged archaeological sites in Minnesota are subject to the same State statutes as terrestrial sites: the Minnesota Field Archaeology Act (1963), Minnesota Historic Sites Act (1965), the Minnesota Historic District Act (1971), and the Minnesota Private Cemeteries Act (1976) if human remains are associated with a submerged site. Further, the case of *State v. Bollenbach* (1954) and the Federal Abandoned Shipwrecks Act of 1987 provide additional jurisdictional considerations when determining State oversight and "ownership" of resources defined by law as archaeological sites (Marken, Ollendorf, Nunnally, and Anfinson 1997, 3-4). Therefore, just like terrestrial archaeologists working for the State or with contract firms, underwater archaeologists are required to have the necessary education, appropriate credentials, and hold valid licenses from the Office of the State Archaeologist (OSA).



MHM's dive crew preparing to dive on an anomaly in Lake Minnetonka (by Mark Slick)

Preface

MHM completed remote sensing side and down imaging surveys of sections of the Headwaters Mississippi River and the Minnesota River in 2010 and 2011. MHM completed the first comprehensive sonar surveys of any Minnesota lake in 2011-2012 with the thorough investigations of Lake Minnetonka (14,528 acres), White Bear Lake (2,416 acres), and Lake Waconia (3,080 acres). The study – that is still ongoing – of these three larger lakes provided MHM the opportunity to hone the research methods and data interpretation that allowed the completion of 6 different archaeological analyses during the Minnesota Suburban Lakes Survey Project (MSLS). Lake Elmo (LE, 206 acres), Lake Johanna (LJ, 213 acres), Lake Pulaski (LP, 702 acres), Lake Sylvia (LS, 1,524 acres), Medicine Lake (ML, 886 acres), and Upper and Lower Prior Lake (PL, 1,238 acres) were chosen for study, and the fieldwork was conducted from mid-September to early October 2016. MHM prepared six project reports, one for each lake documented using sonar.

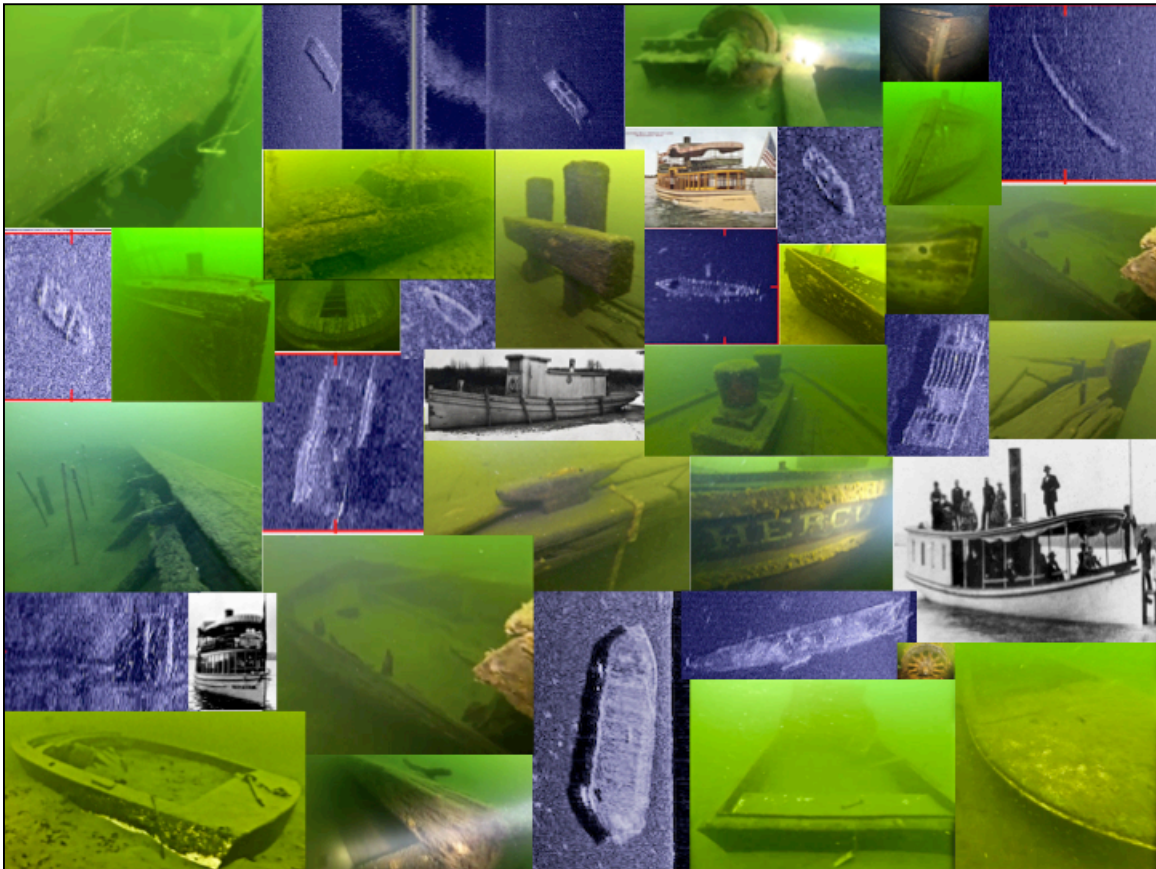


The locations of the 6 lakes surveyed during the MSLS Project.

Research Design

The MSLS Project is a pre-disturbance Phase 1 underwater archaeological side and down imaging sonar survey of 6 lakes (mentioned above) in 5 counties – Hennepin, Ramsey, Scott, Washington, and Wright. This project is a primary step toward the identification and documentation of submerged cultural resources in Minnesota. MHM

chose the six lakes mentioned above for the MSLS Project. The purpose of the MSLS Project is to increase the collective maritime archaeological and historical knowledge of Minnesotans through the documentation of the 6 suburban lakes. The specific goal of sonar survey is the recording of anomalies on the lake bottoms and identifying their possible natures. The side and down-imaging sonar unit creates high-resolution digital images; the sonar data accumulated during the fieldwork will be reviewed and analyzed with the intention of identifying anomalies that may be human-made sites such as wrecks (dugout canoes, steamers, sailboats, rowboats, canoes, barges, motorboats), maritime infrastructure (pier/dock remains, water intakes), other maritime-related artifacts (steam boilers, fish houses), vehicles (cars, trucks, snowmobiles), and other objects. In the future, the positive identification – and significance – of the anomalies will be confirmed through underwater archaeological reconnaissance fieldwork using SCUBA, digital video, measured drawings, and maritime historical research. The 6 lakes chosen for evaluation and assessment during the MSLS Project were chosen for the MSLS Project because of their size, location, and the confirmed maritime activities occurring on and around them, determined by graphic and preliminary historical research.



A sampling of nautical archaeological and underwater sites MHM has investigated and identified in Lake Minnetonka. Similar wrecks may be recorded by the sonar unit during the MSLS Project (photos by MHM volunteers Kelly Nehowig, Ed Nelson, and Mark Slick; sonar images recorded by MHM).

The combined area of the 6 lakes is 4,769 acres. All of the project lakes are under 1,600 acres, with 4 of them under 900 acres and 2 of them under 300 acres. The size of the target lakes for the MSLS Project is significant because until now, no nautical, maritime, or underwater archaeological or historical research has been conducted in what is considered a 'smaller' lake in Minnesota. MHM chose these particular smaller lakes because, like Lake Minnetonka, Lake Waconia, and White Bear Lake, they are located outside of the Twin Cities proper, but are suburban and close enough to Minneapolis and St. Paul for day or weekend trips by lake-bound Minnesotans even in the late 19th Century. Historically, these lakes had holiday resorts on their shores that allowed local residents and visitors to use them as vacation destinations. The resorts often had fleets of sailing and rowing boats for use by their guests, and in some cases, steam launches, larger boats, and personal motorboats. Furthermore, local residents used these lakes for efficient daily transportation. Therefore, maritime activities – boat transportation and recreation that required maritime infrastructure and a terrestrial transportation system (horses, streetcars, railroads, roads, cars) to function – are comparable to Lakes Minnetonka, Waconia, and White Bear on a smaller scale. The MSLS Project will be the first systematic and comprehensive remote sensing survey of a group of smaller suburban lakes that share traits with the well-known larger suburban lakes already surveyed. With this in mind, the process of recording, locating, and identifying anomalies that may be submerged cultural resources that will ultimately be investigated archaeologically using SCUBA is even more important – the maritime history and nautical/maritime/underwater archaeology of these 6 lakes are unknowns. The data collected during the MSLS Project is the first step in the process to determine the extent of submerged cultural resources located on the bottoms of these 6 suburban lakes.

Methodology

A side and down imaging remote sensing sonar survey conducted on a lake is akin to 'mowing the lawn' – transects are run either north/south or east/west depending on wind conditions, lake traffic, and the placement of obstructions such as islands, sandbars, shallow areas, docks, and piers. The length and duration of each transect cannot be known until the day of the survey and is dependent on water depth, and the presence of weeds, islands, docks, and other boats. Ideally, each transect runs north/south or east/west for orderly data analysis, but diagonal transects are often required because lakes are usually not large open squares. The GPS data received by the sonar unit's antenna is imbedded in the recording produced of each transect; this feature allows accurate and efficient anomaly location by determining its latitude and longitude. Many anomalies remain unidentified until their nature can be determined by dive reconnaissance. However, the basic nature of some anomalies can be determined by sonar data analysis with specific questions about the site or object answered using dive reconnaissance.



'Mowing the Lawn' at Lake Pulaski in 2016. Similar side and down imaging sonar survey transects were run on Prior Lake, Lake Elmo, Lake Johanna, Medicine Lake, and Lake Sylvia.

Results of the Minnesota Suburban Lakes Project Medicine Lake

Archaeology and History

Medicine Lake is in Plymouth in Hennepin County west of Minneapolis. Europeans first settled in Plymouth in 1853 and the village was organized in 1858. The town has several lakes within its boundaries, the largest of which is Medicine Lake. On the southeast end of the lake, 7 burial mounds (21-HE-68) were evident in 1887. However, this Woodland Period site was severely affected by 20th Century building and road construction and is nearly non-existent. Pre-contact lithic artifacts have been identified at a site (21-HE-230) on the north end of Medicine Lake. This site was disturbed, with possible Woodland Period stone artifacts mixed with historic objects such as a bottle bottom and other glass. The Dakota, who lived on the north side of the lake, named the body of water as Mdewakan¹ – ‘Lake of the Spirit’ – a term that referred to a drowned Dakota warrior whose capsized canoe was salvaged, but his body was never found (City of Plymouth ND; Harrison 1994, 9; Mather 1997; Upham 1920, 226).

On the southwest corner of the lake – on the Peninsula – and on the southeastern shoreline, Medicine Lake Park was developed in the late 1880s. Real estate speculator and Minneapolis businessman Jacob Barge² platted and arranged the land into lots in mid-July 1887. Many individuals purchased lots in Medicine Lake Park including H.L.F. Witte, Frederick Law, John Alstadt, Frederick H. Huhn, Anton Koslowsky, Charles A. Easterly, Peter M. Dahl, Henry Hahn, Caroline Engel, John Hollsen, Maggie M. Egolf, Christian Depner, Mike Daly, the Minneapolis Industrial Exposition, Gottlieb Schober, John J. Holtzchuh, Gustave A. Pfeifer, Herman Schwarz, P.A. Olin, Torstin C. Berg, and many others. Another land agent, Julius Grosse and Company, advertised Medicine Lake Park lots for people who wanted to be “free from the dust and heat of the city.” Medicine Lake was described as “a famous resort, having elegant, gravelly shores, backed by large forest trees and high, dry land...the lake teems with a great variety of fish, and numerous sail boats ply its waters” (*St. Paul Daily Globe* 1887a-e, 1888a-p).

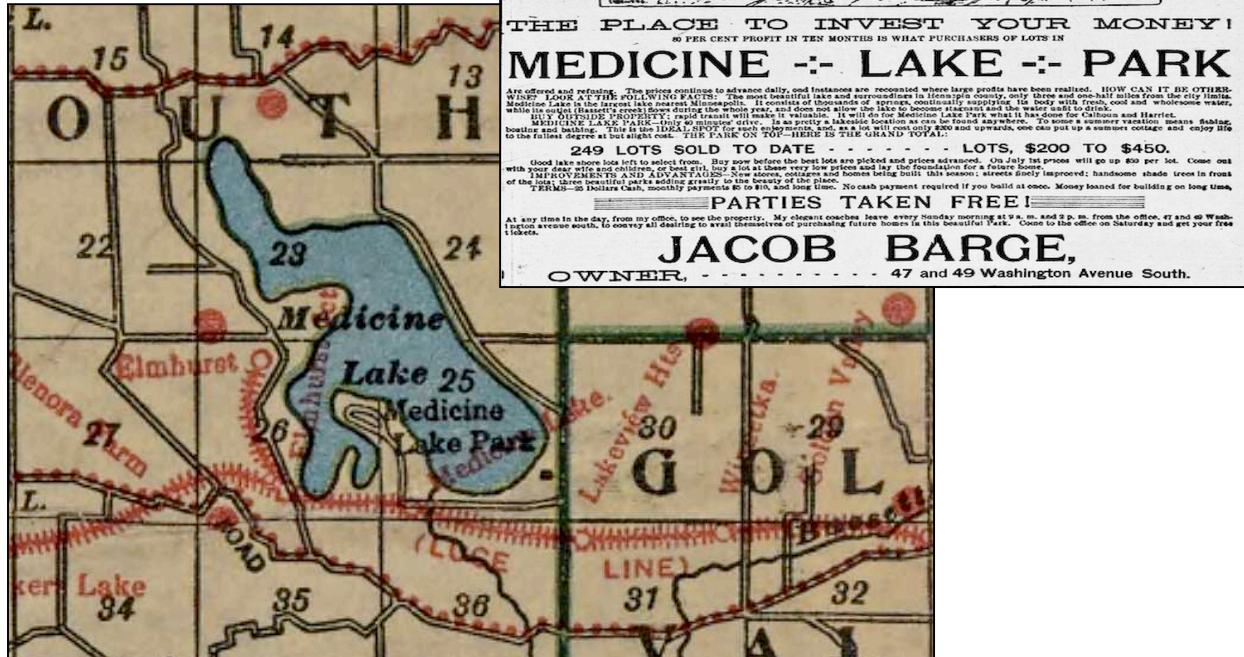
One of Barge’s strongest selling points to convince his audience to take advantage of Medicine Lake’s attributes was public transportation and the proximity of the Park that is “only three and one-half miles from the city limits” of Minneapolis. It was recognized that it was “lamentable...that Minneapolis is slightly behind other large cities in the matter of municipal transportation systems” but that “extensions on several of the street car lines will have been built out into new districts”. Further, “Barge is still talking about his Medicine Lake electric motor, and it is possible that this comparatively new motive power may be in use in the Flour City”. Construction of the Electric Short Line Railway, also called the Luce Electric Lines, began in 1909. The railway was completed to Parker’s Lake beyond Medicine Lake by 1914. This transportation system and its reliable schedule promoted day trips, weekend excursions, and daily living beyond the borders of the city of Minneapolis (*Daily Globe: Minneapolis* 1889; Olson 1976, 520).

¹The ‘dwellers at the spirit waters’ are the Mdewakanton Dakota of Minnesota.

²Barge was a Minneapolis Alderman in the early 1880s (*Minneapolis Evening Journal* 1881).

Right: Jacob Barge advertised his holdings at Medicine Lake Park for sale (St. Paul Daily Globe 1890).

Below: This transportation map shows the Luce Electric Lines and its stops near Medicine Lake in 1910.



Barge continued his promotion of Medicine Lake Park as “the place to invest your money!” with a claim of an 80% return on investments in 10 months. Barge supplied free transportation from Minneapolis to Medicine Lake Park in his “elegant coaches” to visit “the most beautiful lake and surrounds in Hennepin county...it consists of thousands of springs, continually supplying its body with fresh, cool and wholesome water, while its outlet (Bassett’s creek) flows during the whole year, and does not allow the lake to become stagnant and the water unfit to drink...To some a summer vacation means fishing, boating and bathing. This is the IDEAL SPOT for such enjoyments and, as a lot will cost only \$200 and upwards, one can put up a summer cottage and enjoy life to the fullest degree at but slight cost” (St. Paul Daily Globe 1890). Medicine Lake Park a good investment for resale of lots and for long-term summer residences.

Resorts and Hotels. In 1863, Nicholas Bofferding constructed Farmer’s Home Tavern south of Medicine Lake to accommodate visitors, offering lodgings and refreshments. Carl Schiebe and his family purchased the tavern along with 40 acres of land in 1873. The hotel had 26 or more rooms for rent and a dance hall provided a place for entertainment. The tavern, located what is now known as ‘Schiebe’s Corner’, also known as the Half Way House, was torn down in 1977 (Henderschiedt 1992). In 1898,

John and Johanna Engman purchased land and a store on the east side of Medicine Lake, to the west of current Highway 169. They developed their property into a resort that had 35 boats and a picnic area for the use of their guests. In addition to the resort income, the Engmans farmed a section of their property and sold cut lake ice to various companies. In the mid-1930s the resort was re-named Medicine Inn and it remained in business until 1967, when the building was torn down and apartments were constructed on the site. Henry and Helen Hahn established Hahn's Hotel on the east side of the lake to the northwest of Engman's. This establishment was torn down in the 1930s and replaced by cottages (Kluck 2006).

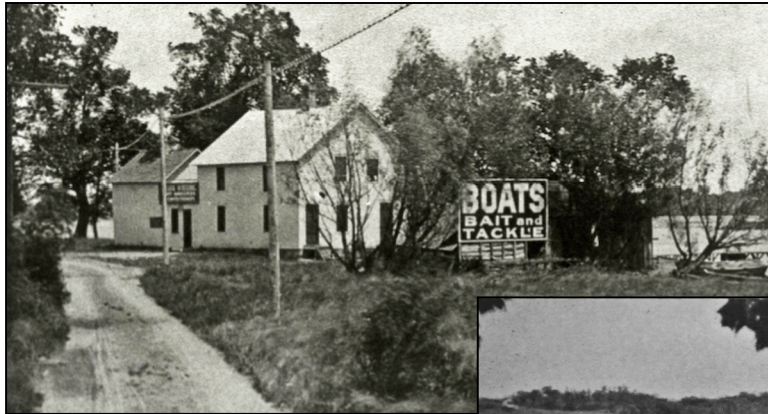


Left: Schiebe's Corner (courtesy of the Plymouth Historical Society).

Right: Medicine Inn (Kluck 2006; courtesy of Plymouth Historical Society).



Boating and Fishing. Watercraft use and fishing were significant pastimes on Medicine Lake throughout its history – even the name derives from an incident involving a capsized Dakota canoe. Already mentioned, the Medicine Inn kept a fleet of boats for rental by their guests, Plymouth residents, and day-trippers. Jacob Barge touted the joys of bathing, fishing, and boating at Medicine Lake Park. Fishing was an important activity at the 135 acre Mission Farms as well. Construction of the farm began in 1927 on the north side of the lake. The shoreline was cleared of washed up detritus and a nearby marsh was drained. A 1,000-foot long canal was established in the drained marsh and a fish spawning area was developed. Pictorial evidence indicates the use of large and small rowboats at Mission Farms. On the west side of the lake, Charlie's Store was a popular spot to rent boats, tackle, and purchase bait (Curtiss-Wedge 1943, 18-20, 30, 45; Plymouth Historical Society).

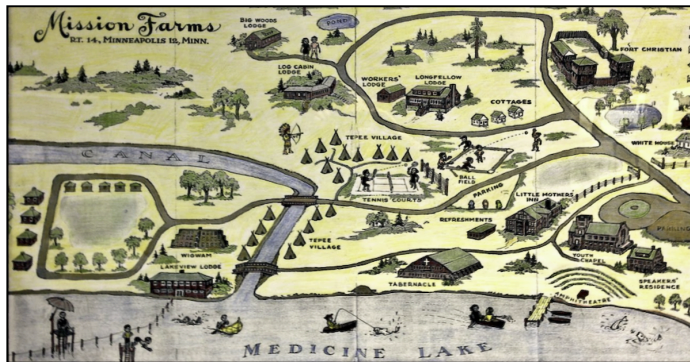


Left: Charlie's Store with its large sign advertising boat and tackle rental, along with the sale of bait (courtesy of the Plymouth Historical Society).

Right: The swimming and boating area at Mission Farms (Curtis-Wedge 1943, 18).



Left: The rowboat fleet at Mission Farms (Curtis-Wedge 1943, 30).



Above: Mission Farms in the 1940s with a lifeguard in a tower, behind a barrier, watching swimmers and divers (Plymouth Historical Society 2013).

Right: Medicine Lake Plat Map. MHM's sonar survey transects ran east to west except on the west side of the Peninsula and the northern arm (Westby 1913, 77).

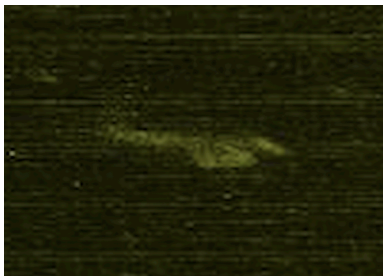


Medicine Lake Sonar Survey Results

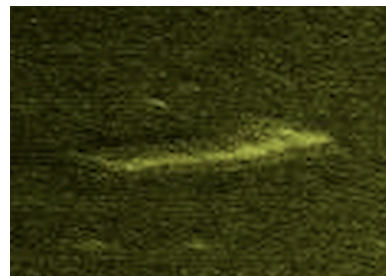
MHM has identified 63 anomalies in the sonar footage recorded during the remote sensing survey of Medicine Lake. MHM has determined that the acoustical signatures of 3 anomalies indicate they are wrecks (A7, A18, A22), 5 are probable wrecks (A6, A14, A15, A16, A31), 1 anomaly is a boat lift (A11), 1 anomaly might be a dock (A3), 1 anomaly is a cable or similar object (A33), 1 anomaly is a type of infrastructure (A60), and 1 anomaly appears to be a poke net (A62). Poke nets hang on poles under water and snag fish, and are well known in Scotland where they are placed in tidal zones; Anomaly 62 is about 200 feet long. The Department of Natural Resources has used seines for decades to catch fish for various reasons. It is unknown who erected A62 without further research.³ The anomalies below are in random order and the potential to provide significant nautical archaeological data are prioritized as High (1), Medium (2), or Low (3). These numbers will assist MHM when designing future nautical archaeological reconnaissance projects using SCUBA.



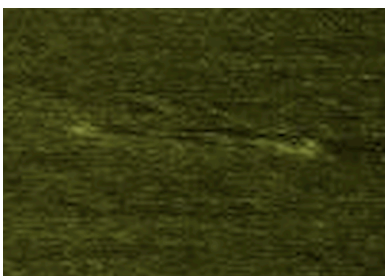
ML-A1 (3)



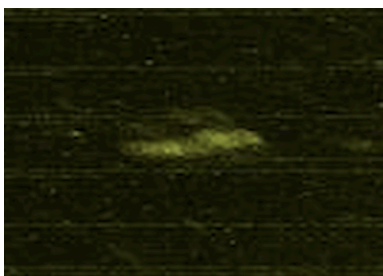
ML-A2 (3)



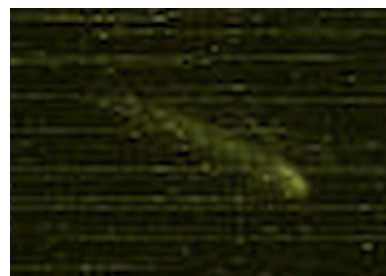
ML-A3 – Possible Dock (1)



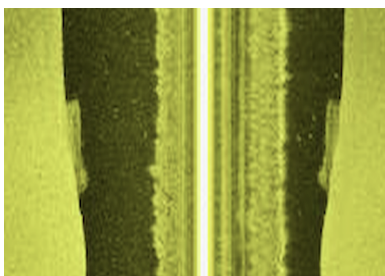
ML-A4 (2)



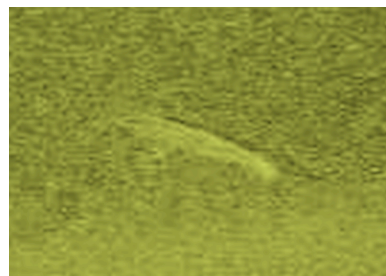
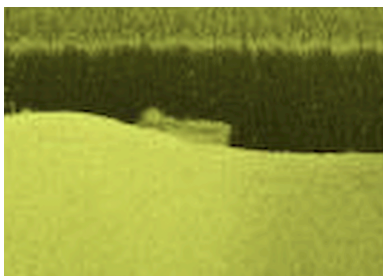
ML-A5 (3)



ML-A6 – Probable Wreck (1)

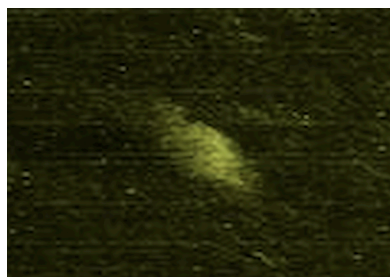


ML-A6 – Probable Wreck (1)

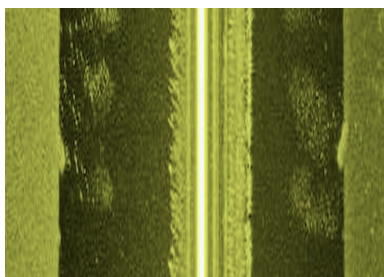


ML-A7 – Wreck (1)

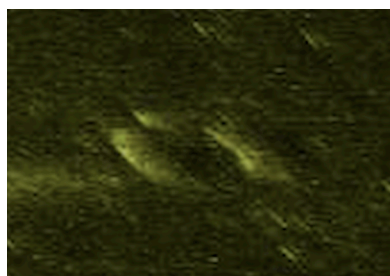
³Prior Lake, Lake Sylvia, and Lake Johanna also contain poke nets.



ML-A8 (3)



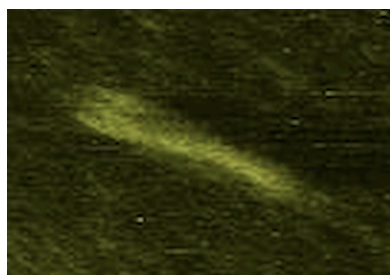
ML-A9 (1)



ML-A10 (1)



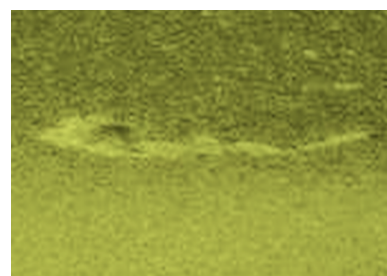
ML-A11 – Boat Lift/Canopy (1)



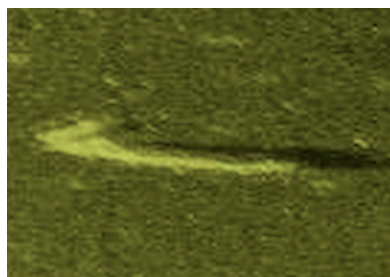
ML-A12 (3)



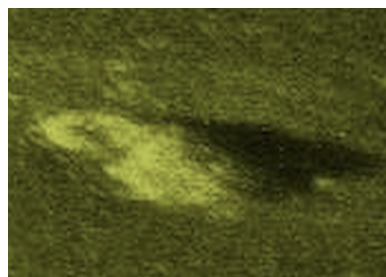
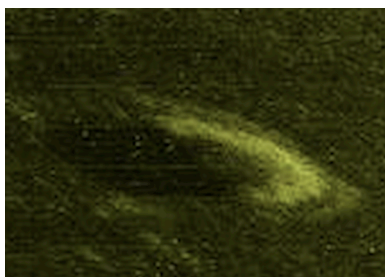
ML-A13 (3)



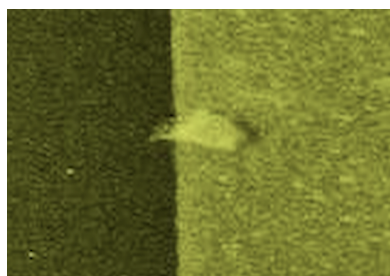
ML-A14 – Possible Partially Buried Wreck (1)



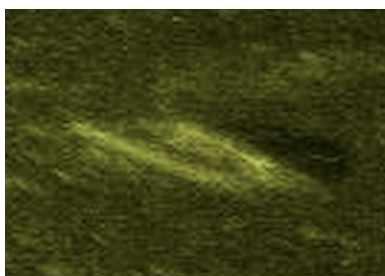
ML-A15 – Possible Partially Buried Wreck (1)



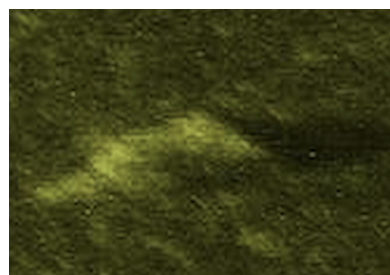
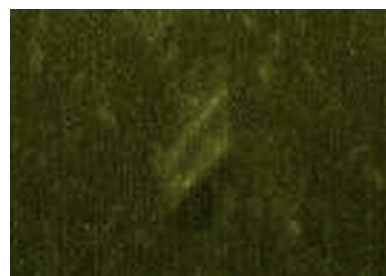
ML-A16 – Possible Wreck (1)



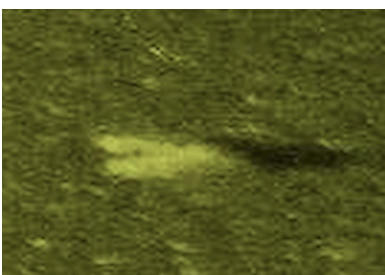
ML-A17 (2)



ML-A18 – Wreck (1)



ML-A19 (2)



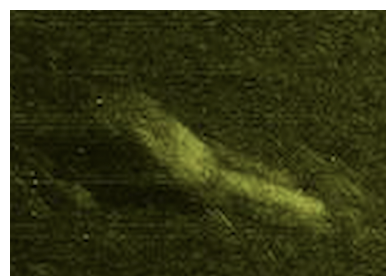
ML-A20 (1)



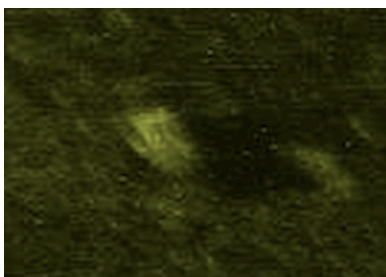
ML-A21 (3)



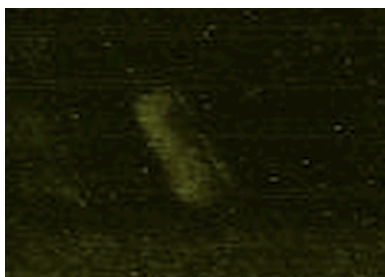
ML-A22 – Wreck (1)



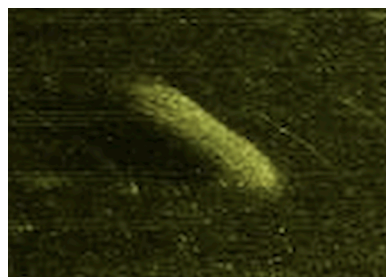
ML-A23 (1)



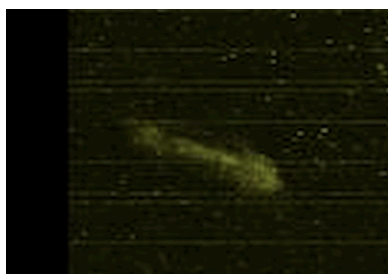
ML-A24 (3)



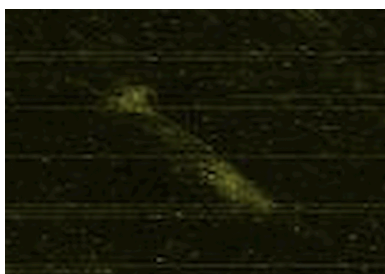
ML-A25 (2)



ML-A26 (2)



ML-A27 (2)



ML-A28 (3)



ML-A29 (2)



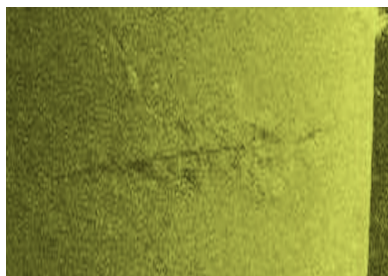
ML-A30 (3)



ML-A31 – Possible Wreck (1)



ML-A32 (2)



ML-A33 – Buried Cable (3)



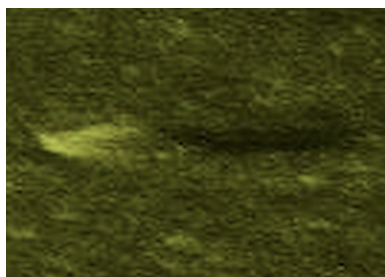
ML-A34 (2)



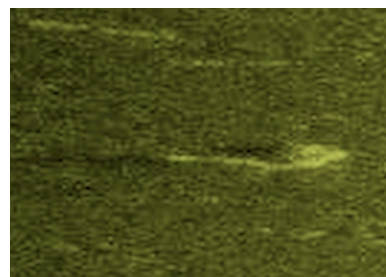
ML-A35 (3)



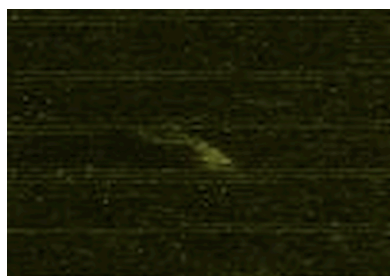
ML-A36 (1)



ML-A37 (2)



ML-A38 (2)



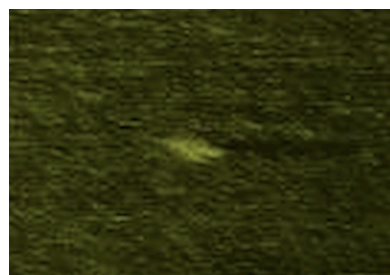
ML-A39 (2)



ML-A40 (3)



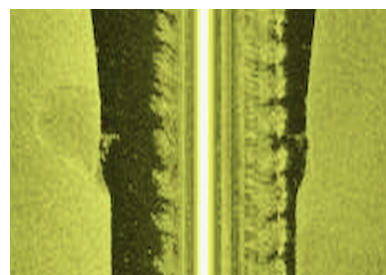
ML-A41 (3)



ML-A42 (3)



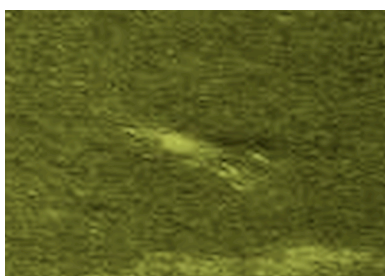
ML-A43 (3)



ML-A44 (1)



ML-A44 (1)



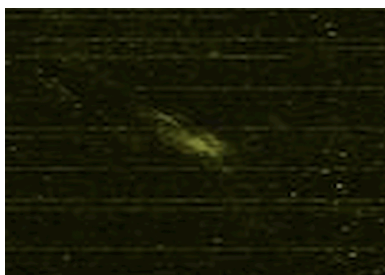
ML-A45 (2)



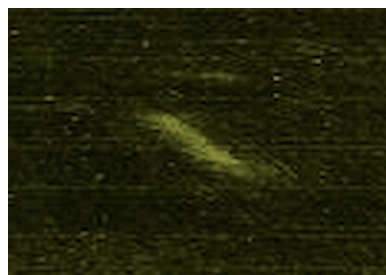
ML-A46 (3)



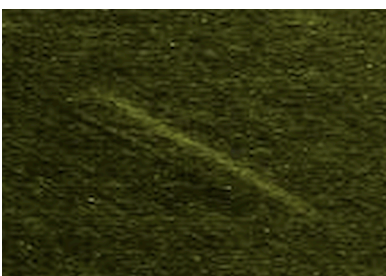
ML-A46 (3)



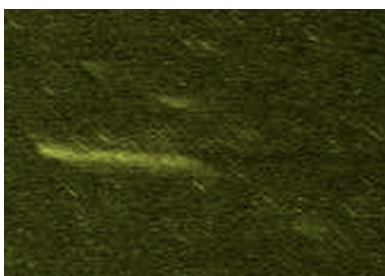
ML-A47 (2)



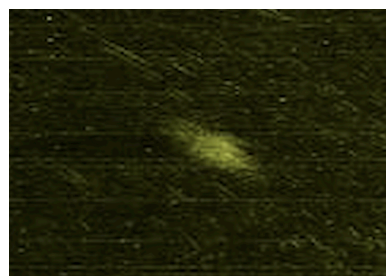
ML-A48 (3)



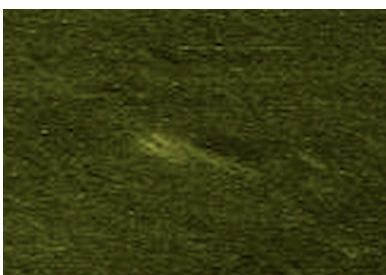
ML-A49 (3)



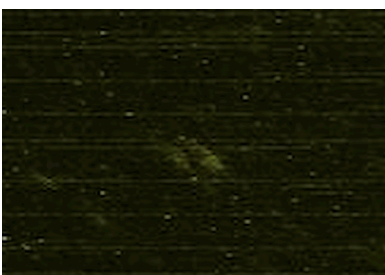
ML-A50 (3)



ML-A51 (3)



ML-A52 (3)



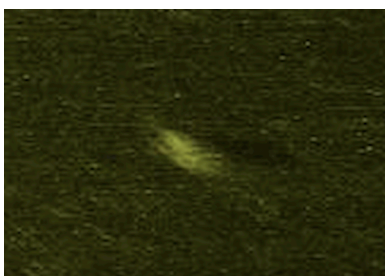
ML-A53 (3)



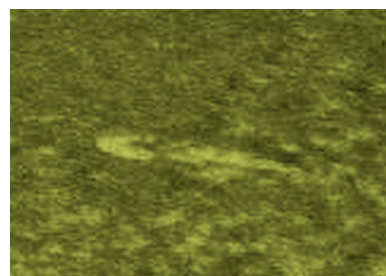
ML-A54 (2)



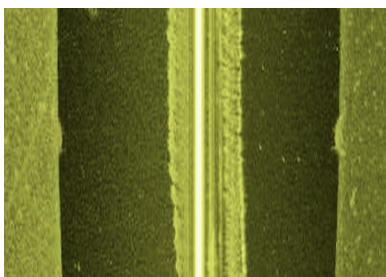
ML-A55 (2)



ML-A56 (3)



ML-A57 (1)



ML-A58 (2)



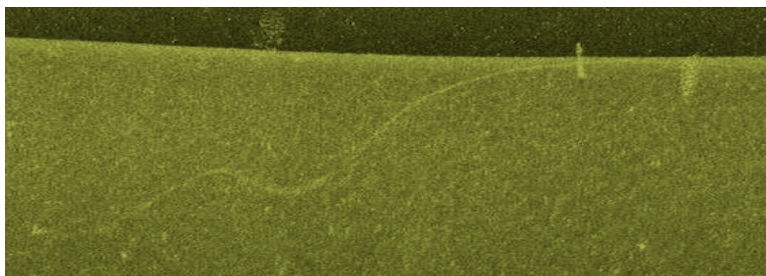
ML-A59 (3)



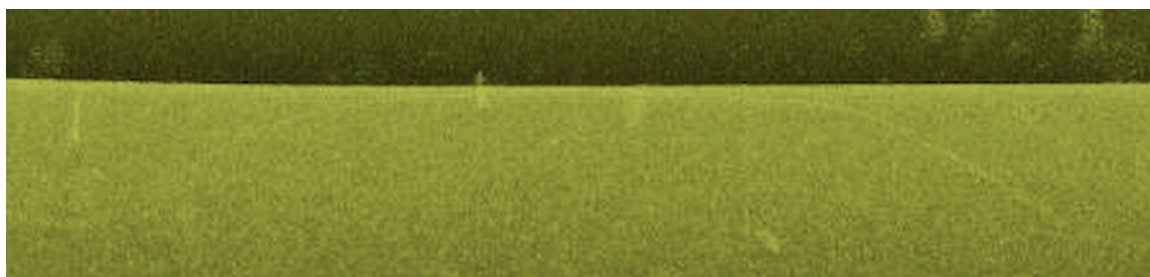
ML-A60 Infrastructure (1)



ML-A61 (1)



ML-A62 Poke Net (1)



ML-A62 Poke Net (1)



ML-63 (1)



A poke net
for tidal
salmon
fishing in
Scotland.

Conclusion

During the Medicine Lake Sonar Survey, MHM recorded several interesting and promising anomalies using remote sensing side and down-imaging sonar. Of the 63 anomalies, A3, A6, A7, A11, A14, A15, A16, A18, A22, A31, A60, and A62 will produce the greatest amount of archaeological data that will assist in future research and diving planning. In particular, the poke net (A62) will greatly enhance our shared knowledge of Minnesota's maritime and fishing history. The investigation of A6 will answer archaeological questions since it appears to be a wreck because of its size, but its shape in 2 sonar passes differ; dive reconnaissance will determine the anomaly's nature. The MSLS Project produced interesting and significant results; MHM recognized 253 anomalies on the bottom of the 6 lakes documented during the surveys. Particularly important is the identification of 13 wrecks through their distinctive sonar signatures, another 22 possible wrecks, 6 poke nets, 5 boat lifts/canopies, and many other maritime sites. The exact nature of the wrecks and other sites will be determined during subsequent projects centered on their investigation by nautical archaeologists using SCUBA. These future studies will greatly enhance our shared maritime history through the recognition of submerged cultural resources and the stories behind their construction and disposition on the bottom of these particular 6 Minnesota lakes. The diversity of nautical, maritime, and underwater sites so far identified by MHM in Minnesota's lakes are tangible examples of the rich maritime history of the area. Through research, diving on wrecks and anomalies to collect pertinent data, and ensuring that the collected information is accessible by the public, MHM will continue to investigate Minnesota's submerged cultural resources into the future. The results of the MSLS Project summarized above is connected to all the work that will come after its completion. It is clear – even through this Phase 1 remote sensing survey – that the types of sites that exist in the 6 small lakes documented during the project are diverse, archaeologically and historically significant, and worthy of great attention.

References

Curtiss-Wedge, Franklyn. 1943. *The Story of Mission Farms, Medicine Lake Camps, Conferences, and Conventions*. Minnesota Historical Records Survey.

Daily Globe: Minneapolis. 1889, 1 May.

Harrison, Christina. 1994. *Report on Cultural Resource reconnaissance Survey on Proposed Construction Site at Mission Farms Nursing Home on Medicine Lake, City of Plymouth, Minnesota*. Archaeological Research Services: Minneapolis, MN.

Henderschiedt, Caroline Grace. 1992. "The Schiebe Family" *Plymouth Historical Society Newsletter* (September); Number 2.

Kluck, Elvera Engman. 2006. "History of Medicine Inn". *Plymouth Historical Society Newsletter* (April); Number 1.

Marken, M.W., A. Ollendorf, P. Nunnally, and S. Anfinson. 1997. *Beneath Minnesota Waters: Minnesota's Submerged Cultural Resources Preservation Plan*. Summit Envirosolutions, Inc. and Braun Intertec, St. Paul. Report prepared for the State Historic Preservation Office, Minnesota Historical Society: St. Paul, MN.

Mather, David. 1997. Medicine Lake Mounds Archaeological Site Form 21-HE-68. On file, Office of the State Archaeologist, St. Paul, MN.

Minneapolis Evening Journal. 1881, 11 February.

Moon, Everett Christopher. 1919. *Everett Christopher Moon Diary and Photographs*. Manuscript Collection. Minnesota Historical Society: St. Paul, MN.

Olson, Russell L. *The Electric Railways of Minnesota*. Minnesota Transportation Museum: Hopkins, MN.

Plymouth, City of. ND. *Plymouth History*. <http://www.plymouthmn.gov/about/history>

Plymouth Historical Society. 2013. *Newsletter*. Spring: Plymouth, MN.

_____. Photograph Collection. Plymouth, MN.

St. Paul Daily Globe. 1887a, 13 July; 1887b, 28 August; 1887c, 9 September; 1887d, 2 December; 1887e, 12 December; 1888a, 6 April; 1888b, 24 April; 1888c, 25 April; 1888d, 9 May; 1888e, 20 May; 1888f, 5 June; 1888g, 19 August; 1888h, 13 September; 1888i, 18 September; 29 September 1888j; 1888k, 28 October; 1888l, 2 November; 1888m, 10 November; 1888n, 16 November; 1888o, 21 November; 1888p, 29 December; 1890, 27 April.

Upham, Warren. 1920. *Minnesota Geographic Names*. Minnesota Historical Society: St. Paul, MN.

Westby, P. O. 1913. *Atlas of Hennepin County, Minnesota*. Hennepin Atlas and Publishing Company: Minneapolis, MN.